



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,404	06/17/2005	Antony G. Poole	63448US005	4593
32692 7590 12/03/2008 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
EXAMINER HOOK, JAMES F				
ART UNIT		PAPER NUMBER		
3754				
NOTIFICATION DATE		DELIVERY MODE		
12/03/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com
LegalDocketing@mmm.com

Office Action Summary

Application No.

10/539,404

Applicant(s)

POOLE, ANTONY G.

Examiner

James F. Hook

Art Unit

3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,12-15,18-33,35-39,41-47 and 49 is/are pending in the application.
- 4a) Of the above claim(s) 7-10,12-14,23 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,15,18-22,25-33,35-39,41-47 and 49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/17/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of a method of pipe repair in the reply filed on November 5, 2008 is acknowledged. The traversal is on the ground(s) that an election of a type of coupling is not required when the method of repair was elected and the coupling species are only part of the non-elected method, that the filling material and lining material are both required in the method of repair as they are different elements of the same embodiment. The examiner agrees with the traversals in that an election of the type of coupling is not required with respect to the method of repair, and that the entire lining method includes both providing a two part resin filling material and a polyurea lining material. Therefore the examiner agrees with applicant as to the elected claims, and claims which stand withdrawn.

Claims 7-10, 12-14, 23, and 24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on November 5, 2008.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 26 a group is set forth as "consisting of polyisocyanate and polyisocyanate" since both of these are the same material the scope of the claim cannot be determined with respect to what actual group of materials is intended to be claimed. To speed up prosecution the examiner will consider the claim to only recite polyisocyanate once.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5, 15, and 18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mueller (DE 3801471).

Claims 1, 3, 15, and 18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Rogalski (DE 4012733).

Claims 45-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Robinson. The reference to Robinson discloses the recited apparatus for lining a pipe

having at least one gap in an interior surface thereof, the apparatus comprising means for applying filling material to the gap so that a generally smooth interior surface of the pipe is formed at the region of the gap, a plurality of reservoirs with respective components of the filling material are stored, and means for ejecting the components from the respective reservoirs simultaneously in order to apply the filling material, the ejection means includes a piston of each reservoir for urging the components in metered quantities, and a power source moves the pistons. It is considered inherent that the gas trapped in the area being repaired will inherently be released and where it releases through is a port. Where the material is sprayed into the pipe to be repaired.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson. The reference to Robinson discloses the recited structure with the exception of stating the force as 2000 PSI. It is considered an obvious choice of mechanical expedients to use any specific pressure to move the filling material where such would only require routine experimentation to arrive at optimum values and would only require routine skill in the art as such is a choice of mechanical expedients.

Claims 1, 3-6, 15, 20, 22, 25-33, 35, 36, and 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson in view of Levens. The gap being formed as a protrusion is considered to be a choice of mechanical expedients and would merely require routine skill in the art to use the repair method of Robinson on any type of gap including a protrusion as such is old and well known in the art. The reference to Robinson discloses all of the recited structure with the exception of forming two layers to repair the pipe by providing a polyurea layer over the filler, that removal of material can be accomplished by a piston apparatus, using the method to block a branch cavity. The reference to Levens discloses that it is old and well known in the art to use an apparatus to provide more than one layer of coating to a pipe by spraying and where the layer can be polyurea, where the material can then be further treated by removal of unwanted material, that such can be used to block branch pipe cavities as well. It would have been obvious to one skilled in the art to modify the method in Robinson by providing a second coat which can be formed of polyurea, the material can be further treated by removing unwanted material using a piston type device, and the method can be used to block branch pipes if desired as suggested by Levens, where such would increase the usefulness of the apparatus, and would provide better protection to the pipe interior to insure the leak is sealed thereby saving money in further repair costs.

Claims 18, 19, 21, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson in view of Levens as applied to claims 1, 3-6, 15, 20, 22, 25-33, 35, 36, and 41-44 above, and further in view of Speech. The reference to

Robinson as modified discloses all of the recited structure with the exception of forming the lining by spraying the material into a cavity formed by an inflatable member, and crosslinking the material. The reference to Speech discloses that it is old and well known in the art to crosslink lining material to form better adherence to other layers and the pipe, and that an inflatable member 16 to hold the repair material 24 in place. It would have been obvious to one skilled in the art to modify the method in Robinson as modified by providing an inflatable member to hold the repair material in place and force it further into the damaged portion, and to crosslink the material to insure proper adhesion as suggested by Speech where such would insure a proper seal and save money in further repair costs.

Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson in view of Levens as applied to claims 1, 3-6, 15, 20, 22, 25-33, 35, 36, and 41-44 above, and further in view of Keller. The reference to Robinson as modified discloses all of the recited structure with the exception of providing a PTFE membrane to allow for venting of gas without losing liquid. The reference to Keller discloses that PTFE membranes can be used for repair liners to allow gas to permeate but block fluids as such is a known property of PTFE. It would have been obvious to one skilled in the art to modify the lining system in Robinson as modified by providing a PTFE membrane to allow for the gases to escape but block fluids as suggested by Keller where such

would prevent further leakage which may lead to a poor adhesion of the lining material thereby saving money in additional repair costs.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references to Davis, Okuhira, Stringham, III., St.Onge, Himmier, Hinger, Gearhart and Pare disclosing state of the art repair methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James F. Hook/
Primary Examiner, Art Unit 3754

JFH